**General Certificate of Secondary Education
June 2011**

ICT **45202**

(Specification 4520)

Unit 2: The Assignment: Applying ICT

Report on the Examination

Unit 2: The Assignment: Applying ICT

The 2011 unit 2 was based on a driving school.

The work presented by candidates showed high standards of attainment, with candidates indicating their understanding of the requirements of both tasks, both in terms of the task itself and also the evidence needed to produce a documented solution to it. Where required, research evidence and acknowledgement of its source(s) was exemplary and it was used effectively in general to aid progress.
The Candidate Booklet initially outlined two tasks that candidates were to undertake:

- Set up a website to provide information about the driving school.
- Set up a system to provide learner drivers with lists of their future driving lessons.

Analysis

As required in the specification, the analysis work should be completed and presented as a discrete section at the beginning of the unit 2 candidates' work. This was appropriately carried out by the vast majority of candidates.

Evidence suggested that many candidates had been equipped for unit 2 analysis by being prepared by their teacher, perhaps using an analysis section from the specimen Unit 2 to practice with.

It was clear from the work presented that, in the main, candidates had been well prepared for this component of the controlled assessment. In addition, centres were annotating the work by including 'ticks' against correctly identified criteria. Where this was in evidence it was straightforward to be able to support the centre marking. There is still a very small number of centres not showing evidence as to how the component marks were arrived at (a requirement of the Code of Practice) and some centres where awards were being made in the 9-10 range where the defined criteria were not completely met.

Once all candidates have completed their work for this section, it should be collected in and retained to be marked later. It was noted that many centres used the Standard Analysis grid to clearly indicate how the marks for this component were awarded. Following this stage, centres must then provide each candidate with Standard Analysis for the task they are to undertake.

Design

There are two elements to design:

Planning;

Explaining the choices made.

From this stage onwards, candidates should now undertake each of the tasks in turn from design through to evaluation of others' use of ICT. There is no problem in the tasks being undertaken in a different order to that presented in the Candidate Booklet, although the final assignment **must** be presented for moderation in the order given in the booklet. Evidence from the work presented indicated that most candidates had been provided with the Standard Analysis to use.

The work presented showed varying levels of addressing the two elements required for each task: planning how the task is to be solved using either 'hand drawn' plans' or 'computer drawn' plans (eg using a software package which wasn't going to be used for implementation) and explaining why the choices were made. Additionally a copy of the test plan should be included in this section, which will eventually be credited in the testing section.

In general, candidates did design those requirements that were to be implemented, namely:

- Task 1: a website with at least 3 pages;

- Task 2: a table to contain the data file (Learner drivers details), a database entry form to efficiently collect future information about learner drivers, a search of a learner driver's future lessons, a report to display those lessons and a link from the website to the database report.

To achieve a mark in the higher ranges, a candidate should provide sufficient detail for a third party to carry out the implementation from the plan.

There were a number of cases where the mark awarded did not reflect the work presented. For assessment purposes, the planning and design choices should be marked separately and then added together for each task. The electronic mark grid (if used) will average the total for each task and record the result in the summary section of the grid.

Plans: were mainly submitted in either 'hand drawn' or 'computer drawn' format. When using 'computer drawn' formats it must be clear to the moderator that the plan did **not** include evidence of implemented work. Some candidates used a software package (e.g. DTP/graphics), other than that to be used for the implementation, to prepare their plans. Either method was appropriate.

Task 1: candidates should show web page layouts including placement, margins, details of formats for fonts/font sizes, sizes of images, colours to be used, etc. The content should be clear and if needed should indicate sources of files. The functionality of the plan should show links between pages using the navigation menu. Pages specifically required were Home, Book a Lesson and a page containing Pass Plus information - overall these were generally well planned. The main area for development in these plans is the fact that a web page has functionality. The destination pages of the links should be clear. This task was attainable for all candidates.

Task 2: candidates should include planned evidence of the structure of the table to be created. A plan for an efficient method of entering new details is likely to be a database entry form. The form should link to the table and should specify the field names to be used and could specify the data space needed, which should be variable to allow for the different 'sizes' of data expected. Formatting should be included as well. The search required to find the learner driver's lesson must be planned plus the report, which links to it. The search should indicate the source of the data (the table(s) used) and the fields needed. Specifically the search must include the criteria to select the records required. This should be a parameter search to enable it to locate any learner driver's lessons. The search criteria should include the first and last name of the learner driver and the date from which the lessons are sought (using 'greater than or equal' to as operators). The search should be named.

The report created was sometimes insufficiently well laid out but often included some necessary details in the header (such as the learner driver's name and the date lessons were from) to avoid repetition. In addition the report should show the other details that would be needed by a learner driver (eg date of future driving lesson, driving experience, etc). The report should be linked to the search created (eg by name or reference). It wasn't unusual to find that the link between the website and the database report hadn't been planned. It is expected that these five plans would be judged separately and combined to produce an overall planning mark.

Design choices: many candidates used the desired outcomes and performance criteria to assist them. Their explanation of **why** these will meet the users' needs is an important aspect of making choices. This should explain why the candidate has chosen a specific way of presenting, say, something on the plan. It does not need to be in a separate section (eg it could be part of the explanation of the planning). The points below arose on some work submitted:

- High marks were being awarded without the necessary explanation of choices made;

- Whilst some credit can be made for candidates indicating their own design choices, awards in higher mark ranges must relate to the correct criteria required;
- Where candidates only give a reason for their own choice it is worth up to 4 marks;
- Some candidates were being awarded a mark of zero on this component when there was evidence of a choice being made on the plan. A minimum choice should be awarded at least 1 mark;
- The choice may take the form of '… because I have been told to do this by Anna';
- Not all the choices can be 'explained' and this should be taken in to account when allocating a mark.

Implementation

There are three elements to implementation:

Show skills, understanding and efficiency in building the solution for both tasks;

Show evidence of the solution to meet the criteria set for both tasks and the model of the costs of running the driving school;

Annotate by explaining how the solution was built or what the solution shows for both tasks.

Candidates implemented those requirements:

- Task 1: a website with at least 3 pages;
- Task 2: a table to contain the data file which was imported, a database entry form to efficiently collect future information about learner drivers, a search for a learner driver's future lessons, a report to display those lessons and a link from the website to the database report.

Work presented for 'Skills, understanding and efficiency' was variable in quality but, in the case of higher ability candidates, often of a good standard. Although there are candidates **not** showing evidence of some key stages (the building blocks in creating the solution) but being awarded a higher mark range for this element. This will also count as 'earlier stages of creation' in the next element.

The Evidence of the solution can only be achieved by comparing what the candidate has produced against the criteria set.

Similarly, annotation can be awarded high marks where candidates have explained/described/stated how they produced the solution, whereas when they show 'what' they have done rather than 'how' it limits their mark to 4 or fewer.

Task 1: this task required the production of some web pages. Generally this was done well by candidates producing effective stages towards the final solution. Many candidates produced good evidence of the solution. Efficiency was evidenced by higher ability candidates showing the use of a standard template and using features such as copy and paste etc. Most candidates appreciated that evidence of 'repeat' skills is not required (eg once a hyperlink is set up from the navigation menu, there is no need to provide repeat evidence of the same process for any other links). This concept applies to all of the tasks but is particularly relevant to this one; it is recommended that candidates annotate their work to indicate this feature. The final web pages produced should be displayed.

One very positive feature appeared to be the number of candidates of lower ability or with learning difficulties who had clearly spent a great deal of time working on this task and under the direction of their teaching staff produced reasonable quality solutions; with the tasks being equally weighted this offered those candidates every opportunity for success at their own level.

Task 2: candidates needed to import the data file provided. The file import should, show decision making in terms of data types, field names and any data restrictions (validation rules, drop down lists) that applied. The creation of the database entry form, the table it links

to, the fields chosen and the formats should be clear. Candidates may add buttons to the form to make it more functional. Candidates should show the creation of the search to select a learner driver's lessons from a certain date.

The task required candidates to carry out a parameter search to enable any learner driver's lessons to be selected. A database report is needed, which is linked to the search, to display the lessons in a way which is fit for purpose. Sometimes reports were produced which didn't link to the search and didn't display all the data needed.

The link from a page in the website to the database was needed. This could be simply a hyperlink to open the database correctly, with clear instructions about what to do. It was sometimes omitted by candidates who had perhaps underestimated its importance.

Testing

There are two elements to testing:

Creating the testing plan;

Showing the evidence that the test has been carried out and checked against the plan.

Testing plans were usually included here, perhaps copied from the design section. They identified what was being tested, the test data and specific expected results (which are later to be compared with actual results).

Testing evidence should show clearly labelled results of testing, which are cross referenced to the testing plan. For the award of the highest mark ranges it should be evident (eg using '✓'s, comments or marks on the printout) that the candidate has actually checked that the results are the same as expected. Candidates should think they are describing to another person how they checked this. Evidence can only be checked if there is a set of expected results to check it against.

There were concerns about mark awards from a few centres where candidates were not producing 'usable' testing plans or the evidence was not checked against them.

Task 1: overall the testing plan was done well for this task: candidates correctly identifying links from the navigation menu, providing appropriate test data (the clickable link), and the expected results (destination page). However all links from the navigation menu must be included even the one back to the page from which it originated. What was not always clear was from which page the navigation menu was being checked.

The evidence of the test was not always well displayed. For this type of test, the minimum evidence required is that the link (url/page name) exists. Candidates can show this by a 'screenshot', with the clickable link highlighted and destination link (url/page name) displayed. Sometimes one or other of these were not clear or shown as evidence, which reduced marks. The responsibility for including the evidence lies with the candidate. With controlled assessment rules, there are no marks for a teacher signing to confirm that the test works. Where candidates only include some of the tests then the mark must be reduced proportionally.

Task 2: there was a test, to select the lessons for Helen Richards from 20 March 2011. The test data should make it clear which datum should be entered where. The expected results, which should be found by the candidate from the hard copy of the data file, must show the exact four records expected (ie date, driving experience, etc). It is not satisfactory to show the actual results here as this gains no credit in the test plan. Expected results are important in testing as the test cannot be verified without them. Without the expected results the testing plan would be affected and the testing evidence can't be checked (so it would also have an impact here as well).
For the award of the highest marks for test evidence, the test should be shown being run (ie test data shown being entered) and the actual results should be shown to be checked against

the testing plan. Lack of expected results in the testing plan will restrict the test evidence to a maximum of 3 marks.

Self evaluation

Some centres overvalued this section. The mark award is for a comment on how the desired outcomes/performance criteria have been met by the solution produced. There are no marks for any other type of evaluation.

Many candidates were provided with and used the desired outcomes and performance criteria from the Standard Analysis. This offered them the opportunity to comment on their own solutions. For discussion or description of the effectiveness of their solutions candidates should focus on at least three of the desired outcomes (say). There were cases where full marks had been awarded when the mark for 'describing the effectiveness of their solution' hadn't been achieved and no considered comparison with an alternative effective solution had taken place. In these cases, a very brief, inconsequential alternative was being offered. This was insufficient to meet the 'discussion' criteria.

Report

Some candidates achieved very well in this section. They began with the issues involved from the thoughts expressed by the organiser and progressed to making recommendations to 'solve' them. This should be done by considering a few aspects of the problem (three, in detail, is sufficient) and incorporating research where needed. Several candidates tried to include too many issues in a cursory way or simply made recommendations without explaining the issues involved. It is very important that candidates do tackle the development needed by the organiser rather than invent their own. The report should be formal, with a title, the receiver, sender and date produced included.

Evaluation of others' use of ICT

This section was variably tackled by candidates. Candidates generally appeared to have used an appropriate solution from another student for this evaluation. In general, their comments found aspects of the others' work which was done differently from their own solution. Not all candidates had chosen at least three desired outcomes/performance criteria to make their judgments against. The part which many candidates did not tackle effectively was that of using the comment on the others' work to propose how it could impact on their own future working. Several candidates suggested how the other person could improve which is not what this evaluation section is about.

Administration matters

- Internal standardisation has a significant effect on candidates' awards. Centres must standardise their marking across different teachers to ensure consistency.

- Teacher annotation: it is a requirement of the Code of Practice that controlled assessment is annotated by the teacher to indicate how marks are awarded; it is evident that centres which did annotate candidates' work were more likely to have their marking agreed. It is perfectly acceptable for annotation to simply indicate where in the candidates' work a particular criterion has been met.

- A positive aspect was that most centres did submit the mark grid with the candidates' work and this was particularly helpful in being able to confirm the accuracy of centre marking.

- As the majority of centres had used the electronic mark grid, there were very few arithmetical errors on:

- the Candidate Record Form
- the transfer between the above and the Centre Mark Form

- All appropriate paperwork needs to be fully completed and signed - including the Candidate Record Form and the Centre Declaration Sheet. There were some assignments without a candidate number and without the necessary Candidate Record Form. Failure to comply with these requirements can cause delays in carrying out the moderation.

- All necessary up-to-date paperwork can be located and downloaded from the AQA website.

- The Centre Mark Form, on which overall candidates' marks were entered for this component, is a three part carbonated form. Centres should ensure that:

  - the marks are clear on all three parts;
  - alterations clearly show the correct final mark;
  - both the second and third copies go to the moderator (or 2 copies of the EDI forms).

- The vast majority of centres are to be congratulated in sending the work of their students for moderation in a well organised fashion that was securely fastened together using treasury tags.

Mark Ranges and Award of Grades

Grade boundaries and cumulative percentage grades are available on the **Results Statistics** section of AQA's website.

UMS conversion calculator: www.aqa.org.uk/umsconversion